

REMARKS

Applicant wishes to thank the Examiner for the attention accorded to the instant application, and respectfully requests reconsideration of the application as amended.

Formal Matters

In this Response, claims 23, 24, 26-36, 41, 42 and 47-50 are pending; claim 23 is amended to more clearly recite the invention. Claims 43-46 are canceled, and claims 1-19, 21-22, 25 and 37-40 have previously been canceled. Claim 20 has previously been withdrawn. Claims 47-50 are added. Support for amended claim 23 can be found in Figure 2. Support for new claims 47-50 can be found in the specification on page 20, lines 1-18. No new matter has been added.

Applicant again respectfully requests that the Examiner review and consider the references cited in the Information Disclosure Statement (IDS) filed on February 24, 2004 with the application, as well as the IDS filed January 11, 2006, and the IDS filed April 24, 2006.

Rejection of Claims Under 35 U.S.C. §112

Claims 43-46 are rejected under 35 U.S.C. § 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims are canceled. Withdrawal of this rejection is respectfully requested.

Rejection of Claims Under 35 U.S.C. §103

Claims 23, 24, 27-31, 34, 36, 42 and 43 are rejected under 35 U.S.C. § 103(a) as unpatentable over Goetz et al., U.S. Patent No. 5,854,913 (hereinafter “Goetz”) in view of Bullions III et al., U.S. Patent No. 4,441,153 (hereinafter “Bullions”). Claims 41, 44, 45 and 46 are rejected under 35 U.S.C. § 103(a) as unpatentable over Goetz in view of Bullions III et al. and common art; and Claims 26, 32, 33 and 35 are rejected under 35 U.S.C. § 103(a) as

unpatentable over Goetz et al. in view of Bullions in further view of Trivedi, et al., U.S. Patent No. 6,430,674 (hereinafter “Trivedi”). Applicant respectfully traverses the rejection since even presuming *arguendo* that it would have been obvious to combine the references as urged by the Examiner, the combined teachings of the references would not result in that which is claimed.

The present invention recites, in amended independent claim 23, a first arithmetic unit to perform an arithmetical operation relative to execution of only the first decoded result, and a shared arithmetic unit operatively coupled in common to the first and second execution controllers to perform arithmetical operations relative to execution of the first decoded result and the second decoded result.

In contrast, Goetz discloses that the X86 Instruction Decoders 803 and the Power PC Instruction Decoders 804 are used to translate instructions for decoding into a common set of instructions whose execution is supported by the microprocessor (see Fig. 9, and column 15, line 59 to column 16, line 11). More specifically, in Goetz, there is one arithmetic unit that is able to perform arithmetical operations relative to execution of the decoded results of both the X86 Instruction Decoders 803 and the Power PC Instruction Decoders 804. For example, Goetz teaches, in column 16, lines 47-51, the Instruction Selection Logic 805 operates relative to execution of the decoded results of both the X86 Instruction Decoders and the Power PC Instruction Decoders 804. Thus, Goetz merely discloses only the (shared) arithmetical unit which performs arithmetical operations relative to execution of the first decoded result and the second decoded result. Goetz does not disclose or suggest a first arithmetic unit performing an arithmetical operation relative to execution of only the first decoded result.

Bullions does not overcome this deficiency. Bullions discloses an Instruction Unit 11 executing IBM System1370 instructions, and a separate Execution Unit 12 executing more

complex IBM system/370 instructions (see Fig. 1, and column 3, lines 30-45). In Bullions, the decoded result of one instruction is divided into two groups depending on the degree of complexity of execution content, and two separate Execution Units are provided for the respective decoded results.

Trivedi does not overcome this deficiency, and the Examiner does not state otherwise. In addition, the Examiner takes Official Notice that a shared register file is common in the art. Applicant respectfully disagrees, and presents a seasonable challenge to this taking of Official Notice. Applicant, in accordance with MPEP 2144.03, explicitly demands evidence that a shared register file is known in the art, and states that such a file is not well-known in the art because a registered file is a specialized storage element not known to be shared or sharable between processors.

It has been held by the courts that to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. See, *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). As illustrated above, the hypothetical combination of Goetz and/or Bullions and/or Trivedi lacks a first arithmetic unit performing an arithmetical operation relative to execution of only the first decoded result, and does not disclose or suggest each and every feature of the present invention as recited in independent claim 23. Thus *prima facie* obviousness has not been established. Accordingly, claim 23 is distinguishable over the art of record in the application. Claims 24, 26-36, 41, and 42 depend from claim 23, incorporating all of the features and limitations in claim 23. Hence, these dependent claims are patentably distinguishable over the art of record in the application for at least the reasons that claim 23 is patentably distinguishable over the art of record in the application. Claims 43-46 are canceled. Accordingly, withdrawal of this rejection is requested.

New Claims

Claims 47-50 are added. Independent claim 47 recites a first arithmetic unit to operate with regard to execution of the first decoded result and not responsive to the control signal from the second controller, and independent claim 50 recites a first information transmission path coupled to a first operation unit and independent of a second controller. As discussed above, the hypothetical combination of Goetz and/or Bullions and/or Trivedi, taken singly or in any combination, fails to teach or suggest such an arithmetic unit or transmission path. Hence, these independent claims are patentably distinguishable over the art of record in the application.

Claims 48 and 49 depend from claim 47, incorporating all of the features and limitations in claim 47. Accordingly, these dependent claims are patentably distinguishable over the art of record in the application for at least the reasons that claim 47 is patentably distinguishable over the art of record in the application. Thus claims 47-50 are allowable.

Conclusion

For at least the reasons set forth in the foregoing discussion, Applicant believes that the Application is now allowable, and respectfully requests that the Examiner reconsider the rejection and allow the Application. Should the Examiner have any questions regarding this Amendment, or regarding the Application generally, the Examiner is invited to telephone the undersigned attorney.

Respectfully submitted,



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